

Serial No. 10/619,311
Art Unit: 1734
Examiner Unknown
April 19, 2004

IN THE CLAIMS:

1. (Currently Amended) A component that forms part of [An apparatus for spraying powder coating material having] a powder flow path for powder delivery to an electrostatic powder spraying system, said component comprising: [wherein said powder flow path has] a body having a powder flow path formed therein, said powder flow path defining a charging surface for triboelectrically charging powder coating material which contacts ~~comes in contact with~~ said charging surface, said charging surface comprising a negative tribocharging material which negatively tribocharges powder by giving up electrons to the powder, and a positive tribocharging material to reduce impact fusion ~~selected from the group consisting of: polyamide resin blends, fiber reinforced polyamides, aminoplastic resins, acetal polymers combined with a fluorinated hydrocarbon resin and acetal copolymers combined with a fluorinated hydrocarbon resin, and mixtures thereof.~~

2. (Currently Amended) The component [spray apparatus] of claim 1 further comprising one or more air passages formed through said charging surface, said air passages being in a fluid communication with a source of compressed air.

3. (Currently Amended) The component [spray apparatus] of claim 1 further comprising an electrical conductor provided adjacent said charging surface, said electrical conductor being connected to one of an electrical ground or a source of electrical potential.

4. (Currently Amended) The component [spray apparatus] of claim 3 further comprising one or more air passages formed through said charging surface, said air passages being in a fluid communication with a source of compressed air.

5. (Currently Amended) The component [apparatus] of claim 1 wherein said negative tribocharging material comprises an acetal homopolymer with polytetrafluoroethylene fibers.

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6. (Currently Amended) The component [apparatus] of claim 1 wherein said negative tribocharging material comprises an acetal resin combined with PTFE [DELRIN AF].

7. (Currently Amended) The component [apparatus] of claim 1 wherein said negative tribocharging material comprises polyamide resin blends.

8. (Currently Amended) The component [apparatus] of claim 1 wherein said negative tribocharging material comprises aminoplastic resins.

9. (Currently Amended) The component [apparatus] of claim 1 wherein said negative tribocharging material comprises fiber reinforced polyamides.

10. (Currently Amended) The component [apparatus] of claim 1 wherein said negative tribocharging material comprises an acetal copolymer.

11. (New) The component of claim 1 wherein said negative tribocharging material comprises an acetal resin bulk material combined with about 20 percent PTFE fibers.

12. (New) The component of claim 1 wherein said component is a powder spray gun nozzle.

13. (New) The component of claim 1 wherein said component is a powder tube.

14. (New) The component of claim 1 wherein said component comprises part of a powder hopper.

15. (New) The component of claim 1 wherein said component is a pump throat.

16. (New) The component of claim 1 wherein said component forms part of a powder flow path associated with a powder spray gun.

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17. (New) The component of claim 16 wherein said powder spray gun comprises a tribocharging spray gun.

18. (New) The component of claim 16 wherein said powder spray gun comprises a corona powder spray gun.

19. (New) The component of claim 1 wherein said component is a wear sleeve.

20. (New) The component of claim 1 wherein said component is a powder supply hose.

21. (New) A component that forms part of a powder flow path for powder delivery to an electrostatic powder spraying system, said component being constructed from a material which is a combination of a negative tribocharging material which gives up electrons to the powder coating material and a positive tribocharging material that takes electrons from the powder coating material, the component including a body having a powder flow path formed therein, said powder flow path defining a charging surface for triboelectrically charging powder coating material which contacts said charging surface.

21. (New) The component of claim 21 wherein the material of the component has a greater amount of negative tribocharging material than positive powder coating material.

22. (New) The component of Claim 21 wherein the component is a spray nozzle of a powder spray gun.

23. (New) The component of Claim 21 wherein the component is a Venturi throat for a powder pump.